

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An illumination apparatus, comprising:
  - a light emitting tube having a pair of electrodes; electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively,
  - ~~a light emitting tube which has a light emitting portion to perform light~~  
emission between the pair of ~~electrodes; electrodes being performed in the light emitting~~  
portion,
  - ~~a sealing portion located at a front side of the light emitting tube;~~
  - ~~a sealing portion located at a rear side of the light emitting tube, with the light~~  
emitting portion being interposed between the sealing portions;
  - a first reflector arranged on a rear side with respect to the light emitting  
portion of the light emitting tube; and
  - a second reflector arranged on a front side with respect to the light emitting  
portion,
  - the second reflector being attached to the sealing portion located on the front  
side, so that its reflection surface may surround substantially a front half of the light emitting  
portion; and
  - a heat capacity of the front-side electrode of the pair of electrodes that is  
surrounded with the second reflector, being made larger than a heat capacity of the rear-side  
electrode.

2. (Currently Amended) The illumination apparatus ~~as defined in~~ according to claim 1, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

3. (Currently Amended) An illumination apparatus, comprising:

~~a pair of electrodes; a light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;~~

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~———— a sealing portion located at a front side of the light emitting tube;~~

~~———— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

~~an~~ the electrode shaft which supports the front-side electrode of the pair of electrodes that is surrounded with the second reflector being made thicker and/or longer than ~~an~~ the electrode shaft which supports the rear-side electrode.

4. (Currently Amended) The illumination apparatus ~~as defined in~~ according to claim 3, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

5. (Currently Amended) An illumination apparatus, comprising:

~~a pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

the sealing portion located on the front side being made thicker than the sealing portion located on the rear side.

6. (Currently Amended) The illumination apparatus ~~as defined in~~ according to claim 5, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

7. (Currently Amended) An illumination apparatus, comprising:  
a pair of electrodes; light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

the sealing portion located on the front side being coated with a heat radiation material which is higher in thermal conductivity than a material of the sealing portion.

8. (Currently Amended) The illumination apparatus ~~as defined in~~ according to claim 7, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of said light emitting tube.

9. (Currently Amended) An illumination apparatus, comprising:

~~a pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located on a front side of the light emitting tube;~~

~~————— a sealing portion located on a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

a wall thickness of the front side of the light emitting portion of the light emitting tube which is surrounded with the second reflector being greater than a wall thickness of a rear side of the light emitting portion.

10. (Currently Amended) The illumination apparatus ~~as defined in~~ according to claim 9, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

11. (Currently Amended) An illumination apparatus, comprising:

~~a pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion performing light emission between the pair of electrodes;~~

~~a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

an end part of the front-side electrode of the pair of electrodes that is surrounded with the second reflector being held in touch with an inner surface of the light emitting tube.

12. (Currently Amended) An illumination apparatus, comprising:

a pair of electrodes; light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion,

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion;

~~a pair of electrode shafts which support the pair of electrodes, respectively, being included;~~

~~the~~ a pair of electrode shafts being respectively furnished with heat conduction parts at their end parts on sides on which they are connected with the pair of electrodes; and

a heat capacity of the heat conduction part of the front-side electrode of the pair of electrodes that is surrounded with the second reflector being made larger than a heat capacity of the heat conduction part of the rear-side electrode.

13. (Currently Amended) A projector, comprising:

an illumination apparatus;

an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;

the illumination apparatus being an illumination apparatus further including:

~~a pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively,



light emission between the pair of electrodes being performed in the light emitting portion,  
the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~\_\_\_\_\_ a sealing portion located at a front side of the light emitting tubes; and~~

~~\_\_\_\_\_ a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube, and a second reflector arranged on a front side with respect to the light emitting portion;

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

a heat capacity of the front-side electrode of the pair of electrodes that is surrounded with the second reflector being made larger than a heat capacity of the rear-side electrode.

14. (Currently Amended) The projector ~~as defined in~~ according to claim 13, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

15. (Currently Amended) A projector, comprising:

an illumination apparatus; and

an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;

the illumination apparatus being an illumination apparatus further including:

light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~\_\_\_\_\_ a sealing portion located at a front side of the light emitting tube;~~

~~\_\_\_\_\_ a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and a

second reflector arranged on a front side with respect to the light emitting portion;

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

~~an~~the electrode shaft which supports the front-side electrode of the pair of electrodes that is surrounded with the second reflector being made thicker and/or longer than ~~an~~the electrode shaft which supports the rear-side electrode.

16. (Currently Amended) The projector ~~as defined in~~ according to claim 15, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

17. (Currently Amended) A project, comprising:

an illumination apparatus; and

an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;

the illumination apparatus is an illumination apparatus further including:

a pair of electrodes; light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located on a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion;

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

the sealing portion located on the front side being made thicker than the sealing portion located on the rear side.

18. (Currently Amended) The projector ~~as defined in~~ according to claim 17, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

19. (Currently Amended) A projector, comprising:  
an illumination apparatus; and  
an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;  
the illumination apparatus is an illumination apparatus further including:

~~a pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~a sealing portion located at a front side of the light emitting tube;~~

~~a sealing portion located on a rear side of the light emitting tube with the light emitting portion interposed between the sealing portion;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light emitting portion;

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

the sealing portion located on the front side being coated with a heat radiation material which is higher in thermal conductivity than a material of the sealing portion.

20. (Currently Amended) The projector ~~as defined in~~ according to claim 19, wherein

an end part of at least one of the pair of electrodes being held in touch with an inner surface of the light emitting tube.

21. (Currently Amended) A projector, comprising:

an illumination apparatus; and

an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;

the illumination apparatus is an illumination apparatus further including:

a pair of electrodes; light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the

corresponding leads, at least the metal foils being sealed in the sealing portions respectively,  
light emission between the pair of electrodes being performed in the light emitting portion,  
the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light  
emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with  
the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting  
portion of the light emitting tube; and

a second reflector arranged on a front side with respect to the light  
emitting portion;

the second reflector being attached to the sealing portion located on the  
front side, so that its reflection surface may surround substantially a front half of the light  
emitting portion; and

a wall thickness of that front side of the light emitting portion of the  
light emitting tube which is surrounded with the second reflector being greater than a wall  
thickness of a rear side of the light emitting portion.

22. (Currently Amended) The projector ~~as defined in~~ according to claim 21,  
wherein

an end part of at least one of the pair of electrodes being held in touch with an  
inner surface of the light emitting tube.

23. (Currently Amended) A projector, comprising:

an illumination apparatus; and

an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;

the illumination apparatus is an illumination apparatus further including:

a pair of electrodes; light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;

~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~

~~————— a sealing portion located at a front side of the light emitting tube;~~

~~————— a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~

a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube;

a second reflector arranged on a front side with respect to the light emitting portion;

the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion; and

an end part of the front-side electrode of the pair of electrodes that is surrounded with the second reflector being held in touch with an inner surface of the light emitting tube.

24. (Currently Amended) A projector, comprising:
- an illumination apparatus; and
  - an optical modulation device into which light from the illumination apparatus is entered and which modulates the entered light in accordance with given image information;
- the illumination apparatus is an illumination apparatus further including:
- ~~a light emitting tube which has a light emitting portion to perform light emission between the pair of electrodes;~~ light emitting tube having a pair of electrodes, electrode shafts, leads, metal foils, a light emitting portion and sealing portions, electrode shafts supporting the corresponding electrodes, one end of the metal foils being connected with the corresponding electrode shafts, other end of the metal foils being connected with the corresponding leads, at least the metal foils being sealed in the sealing portions respectively, light emission between the pair of electrodes being performed in the light emitting portion, the light emitting portion being interposed between the sealing portions;
  - ~~a sealing portion located at a front side of the light emitting tube;~~
  - ~~a sealing portion located at a rear side of the light emitting tube with the light emitting portion interposed between the sealing portions;~~
  - a first reflector arranged on a rear side with respect to the light emitting portion of the light emitting tube; and
  - a second reflector arranged on a front side with respect to the light emitting portion;
  - the second reflector being attached to the sealing portion located on the front side, so that its reflection surface may surround substantially a front half of the light emitting portion;
  - ~~a pair of electrode shafts which support the pair of electrodes, respectively, being included;~~



~~the~~ a pair of electrode shafts being respectively furnished with heat conduction parts at their end parts on sides on which they are connected with the pair of electrodes; and

a heat capacity of the heat conduction part of the front-side electrode of the pair of electrodes as is surrounded with the second reflector being made larger than a heat capacity of the heat conduction part of the rear-side electrode.